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ABSTRACT

This paper presents a study of the educational problems of the Skolt Lapp children living in Finland. (The Skolt Lapps have a distinctively different culture from the rest of the Finnish people.) The study was designed to define: (1) to what degree cultural factors affect the educational readiness (intellectual functions, school motivation, and patterns of work habits) of these children, and (2) to what degree these cultural factors affect school achievement. Data collected on Skolt children, ages 6-15, were compared with data from a sample of Finnish children. Measures included intelligence tests, scales rated by teachers, children and parents, children's drawings, projective tests, half-open interviews, and observations. Recent developments in the education of the Lapps in Finland are discussed, including the general outlines of suggested bills and statutes drawn up by various committees. The reforms will attempt to grant the Lappish Language the position of an official language and language of instruction at all levels in schools, and encourage the development of curricula based on a Lappish cultural background. (ED)

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ABSTRACT

The main purpose of this paper was to study the educational problems of Skolt Lapp children living in Finland. The intellectual and motivational readiness for school work and school achievement of Skolt children in Sevettijärvi and in Nellim were compared with those of a sample of Northern Finnish children by means of WISC, teachers' and children's ratings (Cattell, E.S. Schaefer), school marks and achievement tests. The non-verbal functions typical of school activities and verbal readiness in Finnish were poorer in the Sevettijärvi group than in the other groups, while the exact perceptions typical of the Skolt culture were higher in both Skolt groups than in the Finnish group. The Sevettijärvi boys showed a significantly poorer intellectual readiness for school work than the other groups. The school motivation and achievement of the Sevettijärvi group, especially of the boys, were poorer than those of the Finnish children. The collision of two different cultures and languages, with abrupt changes in role playing especially for the males, and the shortcomings of the Finnish school system, were observed to account for these difficulties.

Recent developments in the education of the Lapps in Finland are discussed. Several committees have delivered their proposals for bills and statutes in 1971-1974, but these have not come into force yet, though working groups are developing Lappish learning material. The reforms attempt to grant the Lappish language the position of an official language and language of instruction at all levels in schools. The curriculum should be founded upon a Lappish cultural background, with the freedom to choose between the Lappish curriculum and the Finnish one.

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SCHOLASTIC LEARNING PROBLEMS OF SKOLT LAPP CHILDREN: intellectual and motivational readiness, school achievement and official plans for schooling

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The problems faced by the Lapps to-day are global ones; at the same time economic, social and cultural. Basically the crisis arises from the collision of two different cultures. The Finnish culture - similar to the Western cultures - leans on private ownership, the Lappish one on common ownership. Traditionally the sources of livelihood amongst the Lapps, fishing, hunting and the raising of reindeer were located over vast land areas which were the common property of the family of village. At present the Lapps have no judicial rights over land or water areas. Their economy has changed considerably, and can no longer ensure them a decent living, which in turn has had social consequences (e.g. Nickul 1970, Nuorgam-Poutasuo 1972).

An important cultural factor is the linguistic difference between the Finnish and the Lappish languages, for while both are Fenno-Ugric languages, they are only remotely related and are not mutually intelligible. The differences between the dialects or the languages of the three Lappish groups; the Skolt Lapps, the Fjeld or Reindeer Lapps and the Fishing Lapps make efforts at unification very difficult.

The Lappish culture is becoming assimilated to that of the Finns chiefly as a result of changes in the economy of the Lapps and of the influence of the Finnish school system.

The Lappish language is not an official language in the Nordic countries, so that it does not have the same official position of a native language in the Finnish school system as is accorded to Finnish and Swedish. Finnish is used as the language of instruction in schools in the Lappish area, the Lappish children being taught in the same manner as the Finnish children, and according to the same curriculum. E.g. Lappish children who are native speakers of Lappish receive a grade for Finnish as their native tongue. For these purely linguistic reasons and because of differences in culture, most of the Lappish children do not progress in their academic performance as well as Finnish children might (e.g. Nuorgam-Poutasuo 1972, Seitamo 1972)

During the last 4-5 years the problems of the Lappish children have at long last received serious attention, and improvements are under way.

The present paper has a dual purpose, to study the educational problems of the Skolt Lapp children, and to discuss the official plans for improving education among Lappish children in Finland.

The data of this paper has been selected from a study the writer has carried out as member of the IBP/ HA research group, and as investigator of the National Board of Education in Finland.

The theoretical frame of reference is based on learning theory (Bloom 1964, Hunt 1961, Wolf 1964, Hansegård 1968)

The aim of the study

The purpose of this paper is to study, to what extent the cross-effect of the traditional Skolt culture and the Finnish schooling system results in difficulties in school work for the Skolt Lapp children.

The problem is to define

1. to what degree cultural factors affect the educational readiness of the Skolt Lapp children in the following functions:
   a. intellectual functions
   b. school motivation and patterns of work habits
2. to what degree these factors affect school achievement.

The sample and the method

The subjects were the whole school age group of Skolt children in Sevettijärvi (81) and in Nellim (30), age range 6-15 years. The control group was a sample from Northern Finland: the two villages nearest to the Lappish area, Sassali in Sodankylä and Tanhua in Savukoski (68). Because of the difficulty of the task, several measures were used: intelligence tests, scales rated by the teachers, children and parents, childrens' drawings, projective tests, half-open interviews, observations etc.

In this connection the following measures were used to discover the problem areas:

(in all groups:)

1.a. Wechsler Intelligence Scale for Children; Block Design as a measure of culture-free performance for eliminating the effects of cultural factors as much as possible. This definition is more a practical evaluation of potential learning ability than it is a fair culture-free estimate.

(In the Sevettijärvi and the Northern Finnish groups: the groups of intensive study:)

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1.b. Teachers' ratings of the personality traits of the children (5-point numerical scale, Cattell-Pitkänen); Childrens ratings: the question :'do you like to go to school'(yes - no).

2. School achievement: school grades; the percentage of those who failed to progress from one grade to the next; follow-up and retrospective study during first three school years (grades I-III).

Cultural situation: the traditional Skolt community versus Finnish schooling society, is described by means of certain major characteristics (table 1). These are derived from the writer's earlier studies by means of observations, interviews and from the Inventory "Childrens' Reports of Parental Behavior" (Schaefer's Scale; Seitamo 1971). These characteristics concern Sevettijärvi. The culture in Nellim can be seen to be markedly more accultured to the Northern Finnish culture.

Statistical analysis: The correlative analyses are not yet completed. In this connection significance of differences of means by t-test and discrimination analysis are available.

The general hypothesis

On the basis of the cultural characteristics, we can assume that in the Sevettijärvi group there is

1.a. underdevelopment in verbal intellectual functions and in non-verbal intellectual functions typical of the schooling society, but a high degree of development in functions typical of the Skolt culture.

1.b. poor motivation on all levels of school performance, and underdevelopment in the work habits needed for school work.

2. poor school achievement.

Poor performances (1a, 1b, 2) are assumed to concern most markedly the Sevettijärvi boys. The assumption is based on abrupt changes

in role playing for the males in Sevettijärvi and on the lesser degree of guidance and control exercised upon the boys by their parents. The Nellim group is assumed to be rather similar to the Finnish group (1a).

1. Readiness for school

a. Intellectual functions

Differences between the culture groups (table 2):

On the Block Design there are no significant differences between the culture-groups. We can conclude that the intellectual levels of these groups are equal when the effect of cultural factors is eliminated as much as possible.

On the Picture Completion Test the Skolt groups score significantly higher than the Finnish group. The importance of exact perceptions when living in the wilds and a cultural pattern which reinforces perceptual functions have been assumed to account for these abilities favorably. The results are in accordance with the hypothesis of the high degree of development in functions typical of Skolt culture.

On the Picture Arrangement Test the Sevettijärvi group scores significantly lower than the other groups. Deprivation in the physical stimulus environment is assumed to account for this difference.

On the Object Assembly Test the Skolt groups were similar to the Finnish group.

On the Coding the Sevettijärvi group scores significantly lower than the other groups. The most important component of this test is speed and accuracy in reproducing one's perceptions with the pencil. Lack of training, motivation and speed efficiency in this type of function typical of the schooling society are assumed to lead to this difference.

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On most of the verbal tests (tables 3, 4) the Sevettijärvi group scores significantly lower than the other groups. In Vocabulary the differences are very marked. The Nellim and Finnish groups are very close together. Poor ability in Finnish and deprivation of verbal stimuli are assumed to be the causes of the inferiority of the Sevettijärvi group in the verbal intellectual functions.

Sex-differences:

Boys from Sevettijärvi tend to score lower than other groups on several culturally-linked tests (table 5a, b). -

On most of the verbal tests the levels of the Sevettijärvi boys are significantly lower than those of the boys from the Nellim and Finnish groups. The differences between the Sevettijärvi boys and girls point in the same direction but not significantly. Within the other groups an opposite trend is found between the two sexes: a tendency appears for the boys to attain a better level.

The differences between the non-verbal performances, especially on the Coding, are very marked. In this subtest the Nellim group resembles the Sevettijärvi group more than it does the Finnish group. The inferiority of the Skolt boys in this and other performance tests may be explained by cultural and neurophysiological factors. The non-directive educational attitudes of the parents towards the Skolt boys do not offer proper opportunities for training in perceptual and fine motor coordination, e.g. in handicrafts. The girls, however, develop fine motor abilities by participating in the hand-work of the women from their early years. They are also generally guided and controlled more than the boys. According to bio-social theory (Dawson 1971) the boys suffer more than the girls from the disadvantageous environment, malnutrition etc,

which has an unfavourable effect on their physiological maturity, motor development and spatial learning ability.

The IQs of the Sevettijärvi boys are significantly lower on every scale than those of the other boys, but lower than that of the Sevettijärvi girls only on the Performance Scale. Thus the inferiority of the Sevettijärvi Skolt boys appears especially clearly in non-verbal functions, though the cross-cultural differences between the Sevettijärvi Skolt and Finnish boys are still clearer on the Verbal Scale than on the Performance Scale.

The differences between the girls are rather small. In the verbal functions there is a slight tendency towards a higher level in the Finnish girls, but no significant differences appear. On the Vocabulary the difference is somewhat clearer reaching the level of a tendency ($p < .1$). On the Picture Completion Test the Skolt girls score significantly higher than the Finnish girls.

Function of age

Amongst the Sevettijärvi group most verbal functions improve significantly more than the expected norm-values as a function of age (table 6). The improvement is more marked amongst the boys. Thus the readiness of the Sevettijärvi boys in verbal intellectual functions is very poor in the lower classes, but improves markedly as a function of length of school career.

b. School motivation and patterns of work habits

Motivation to attend school is significantly lower for the Sevettijärvi group, especially for the boys, than for the Finnish group (table 7). The differences between the Skolt and Finnish boys also show up very clearly in the teachers' ratings. The differences between the girls' groups are small. Significant differences also appear between the Skolt boys and girls.

The Sevettijärvi boys may be distinguished significantly from the girls by a discriminator consisting of attitudes towards school work (table 8): Low school motivation, poor work habits, hostile attitudes towards school and the teachers, and traits of imbalance are characteristic of the Sevettijärvi Skolt boys. 'Avoidance' -behaviour manifested as fearfullness, ineffectiveness and dislike for school characterize the Skolt boys, while 'approach' -behaviour in the form of activity is typical of the Finnish boys (table 9). These discriminating traits increase significantly as a function of school career.

2. School achievement

The percentage of those who fail to progress from one grade to the next each year is enormously high in the Sevettijärvi group (table 10) most of the failures occuring during the first three years and more often among the boys than among the girls. In reading and writing the achievements of the Sevettijärvi boys are significantly poorer than those of the corresponding group of Finnish boys and of the Sevettijärvi girls (table 11) and in mathematics poorer than those of the Finnish boys. The mean grades of the Sevettijärvi boys in these and other theoretical subjects, as given in their school reports, are significantly lower than those of the girls. The pupils remaining in the same class for two years are included in these calculations. Thus the longer school career of the Skolt boys does not serve to raise their achievements to the same level as those of the other groups.- The same differences also appear in the achievement tests.

Continuation to more advanced schooling is rare and the interruption of education is common.

Summarizing the main results, it is found that the Sevettijärvi group occupies the least favourable position in intellectual and

motivational readiness for school work in terms of the Finnish school system. These factors together comprise an unfavourable accumulation of cultural consequences for the Skolt children. According to the hypothesis, this concerns especially clearly the Sevettijärvi boys' group. The collision of two different cultures with abrupt changes in role playing for the males and a very important factor - the shortcomings of the Finnish school system result in poor school achievement. This in turn prevents the boys from finding school rewarding, lowers their motivation and self-confidence and leads to behavioral disturbances. Deprivation of firm continuous contact with men while living in dormitories during their school years increases the difficulties of the boys. Because of feelings of inferiority, the Skolt boys are very unwilling to undertake further vocational training. These difficulties also have very far-reaching consequences for the maintainance and development of the Skolt culture.

The difficulties of the other Lappish groups are similar to those of the Skolts.

Plans for schooling

Recent developments in the education of the Lapps in Finland are connected with changes in the minority status of the group. In recent years the attitudes of the authorities and the Finnish people towards the rights of the Lapps have improved. This was preceded by a period of national awakening amongst the Lapps, with demands for reform according to the United Nations Declaration of Human Rights.

Several Committees have been appointed and have delivered their reports:

- The Committee for the Development of Education among the Lapps, appointed by the Ministry of Education; report - 1971.
- The committee for planning the curriculum of the Lappish school system; preliminary report - 1973.
- A working group appointed by the National Board of Education in 1971, co-operating with the above mentioned committee and the University of Oulu, for planning the curriculum and producing and testing learning material for schools in the Lappish area; still working. The working group, with several subgroups, consists of Lappish teachers and other Lapps, experts in psychology and the various school subjects and representatives of the public education system. The group is working under the direction of Mrs. H. Nuorgam-Portasuo, a Lapp herself and a Lappish scholar. The very important starting point is to encourage the Lapps themselves to assume responsibility for the development of their own school system.
- A committee appointed by the Council of State to prepare a study on the economic, social, cultural and judicial position

of the Lapps and to make proposals on the future administration of Lappish affairs; report - 1973.

These committees have drawn up general outlines, suggestions, bills and statutes for the development of education among the Lapps. The main reforms suggested are the following:

- Lappish should be granted the position of an official language in the Lappish area; Lappish should be used beside Finnish in government offices and courts, as a language for public documents and forms.
- Lappish should be used at all levels in the school system as a language of instruction
- the curriculum should be founded upon a Lappish cultural background
- the teaching of Finnish language as a second language should begin gradually during/after the first school year
- the objectives should be a good bilingualism and good knowledge of both Lappish and Finnish culture
- there should be freedom to choose between the Lappish curriculum and the Finnish one.

The bills proposed have not legally come into force yet. A statute for the transition period in 1973 places emphasis on the planning of education for the Lapps. The working group mentioned above has continued producing Lappish learning material and material embodying Lappish culture. The adaptation of material developed in the other Nordic countries has been hindered by the different orthographies used for the Lappish language in these countries, but the Lappish Language Board, under the Lappish Council, is working to develop a uniform orthography. An orthography for the Skolt Lapp language was developed in 1971 (Korhonen) and a Skolt Lapp ABC (Sammallahti 1972-73) and grammar (Korhonen, Mosnikoff,

Sammallahti) have been published. Because the Skolt Lapp language differs greatly from the other Lappish languages, a spesific orthography is needed. This orthography is still at an experimental stage. An elementary teaching programme in Skolt Lappish was carried out experimentally in 1972-1973 and will be continued. In the other Lappish schools Lappish is taught as a voluntary subject for 1-2 hours a week. Other experimental programmes and projects are also under way.

The results of these experiments have been encouraging, with motivation for school attendance notably better when the teaching takes place in the mother tongue. It is to be hoped that the Lappish school system will develop further as the proposals for reform are implemented in the near future.

The Lappish Institute, situated in Northern Norway (Kautokeino), started its work last year supported by the Nordic countries. The leaders of the Institute are Lapps from Norway, Sweden and Finland. The Institute will act as a centre for the coordination and unification of Lappish affairs in the Nordic countries. Its work will include the development of a common written language and possibly also the further development of Lappish learning material and common aspects for the Lappish school system.

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Table 1

CHARACTERISTICS of SKOLT CULTURE

STIMULUS - ENVIRONMENT

deprivation in stimuli encounted in schooling society

dominance of stimuli related to nature

LANGUAGE

dominance of Skolt language

NORMS : TRADITIONAL

freedom - living amongst nature important

efficiency not valued

good human relationships valued

EDUCATION

parents : warm - tender - permissive

helpful - comforting - indulgent

schooling of parents poor

rational explanations rare - irrational usual

poor control over school achievement

towards boys: fathers more permissive

less control over school achievement

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compared with Northern Finnish Culture

Table 2

MEANS, STANDARD DEVIATIONS and SIGNIFICANCE of DIFFERENCES between MEANS on NON-VERBAL TESTS

	1 SEVETTI N = 81	2 NELLIM N = 30	3 N.FINLAND N = 68	t 1:3	t 1:2	t 2:3
WISC:KOHS CUBES (ED)	11.51 (2.24)	12.27 (2.75)	11.74 (2.13)	0.63	1.49	1.04
PICTURE COMPLETION (PC)	11.69 (2.31)	12.43 (2.93)	10.43 (2.33)	3.32$^{\times\times}$	1.40	3.62$^{\times\times\times}$
PICTURE ARRANGEMENT (PA)	6.96 (2.27)	8.10 (2.02)	8.29 (2.79)	3.22$^{\times\times}$	2.41$^{\times}$	0.34
OBJECT ASSEMBLY (OA)	10.47 (2.78)	11.70 (2.53)	10.76 (2.77)	0.65	2.12$^{\times}$	1.50
CODING (COD)	6.48 (3.07)	7.93 (2.97)	7.41 (2.29)	2.07$^{\times}$	2.24$^{\times}$	0.95

$\times$ $p \leq .05$
$\times\times$ $p \leq .01$
$\times\times\times$ $p \leq .001$

Table 3

MEANS, STANDARD DEVIATIONS and SIGNIFICANCE of DIFFERENCES between MEANS on VERBAL TESTS

	1 SEVETTI N = 81	2 NELLIM N = 30	3 N.FINLAND N = 68	t 1:3	t 1:2	t 2:3
VOCABULARY (V)	7.95 (2.89)	9.07 (2.48)	9.84 (2.88)	3.97$^{\times\times\times}$	1.87	1.27
INFORMATION (I)	9.07 (3.06)	9.76 (2.57)	10.37 (3.23)	2.51$^{\times}$	1.05	0.95
COMPREHENSION (C)	10.36 (3.07)	12.43 (2.98)	11.46 (3.34)	2.09$^{\times}$	3.19$^{\times\times}$	1.38
SIMILARITIES (S)	10.54 (2.70)	10.33 (3.23)	11.24 (2.93)	1.49	0.34	1.36
ARITHMETIC (A)	8.48 (2.16)	9.50 (1.81)	8.41 (1.85)	0.21	2.30$^{\times}$	2.71$^{\times\times}$
age	10.83 (2.43)	10.88 (2.50)	10.73 (2.50)	0.08	0.23	0.23

$\times$ $p < .05$
$\times\times$ $p < .01$
$\times\times\times$ $p < .001$

Table 4

MEANS, STANDARD DEVIATIONS and SIGNIFICANCE of DIFFERENCES between MEANS of IQs on WECHSLER INTELLIGENCE SCALE FOR CHILDREN

	1 SEVETTI N = 81	2 NELLIM N = 30	3 N.FINLAND N = 68	t 1:3	t 1:2	t 2:3
VERBAL SCALE	95.31 (14.02)	101.27 (12.26)	101.43 (13.72)	2.68^{xx}	2.05^{x}	0.05
PERFORMANCE SCALE	95.83 (13.46)	103.30 (13.54)	97.32 (12.63)	0.70	2.59^{x}	2.11^{x}
FULL SCALE	95.20 (13.36)	102.43 (12.57)	99.43 (12.74)	1.97	2.57^{x}	1.08

^{x} $p < .05$
^{xx} $p < .01$
^{xxx} $p < .001$

Table 5a

MEANS, STANDARD DEVIATIONS and SIGNIFICANCE of DIFFERENCES of MEANS on INTELLIGENCE TESTS, sex-differences

Tests	Sevetti 1(39)	Sevetti 2(42)	Nellim 1(16)	Nellim 2(14)	N.Finland 1(33)	N.Finland 2(35)	girls versus boys: Sevetti df 79		Nellim df 28		N.Finland df 66	
BD	12.0 (2.1)	11.0 (2.3)	12.4 (2.7)	12.1 (2.9)	11.5 (2.2)	12.0 (2.1)	1.92	.1	.34	NS	-1.04	NS
PC	11.8 (2.4)	11.6 (2.2)	11.8 (2.5)	13.1 (3.3)	10.0 (2.2)	10.9 (2.4)	.48	NS	-1.21	NS	-1.56	NS
PA	7.4 (2.3)	6.5 (2.2)	8.0 (1.6)	8.2 (2.5)	8.0 (2.2)	8.6 (3.2)	1.71	.1	- .28	NS	- .91	NS
OA	10.8 (2.8)	10.2 (2.8)	12.1 (2.4)	11.3 (2.6)	10.7 (2.7)	10.8 (2.9)	1.0	NS	.81	NS	- .1	NS
COD	7.9 (3.1)	5.2 (2.4)	9.4 (2.6)	6.3 (2.6)	8.0 (2.3)	6.9 (2.2)	4.39	.001	3.18	.01	1.96	.1
non-verbal IQ	99.9 (14.2)	92.0 (11.6)	105.2 (10.9)	101.1 (16.2)	96.4 (11.2)	98.2 (14.2)	2.73	.01	.78	NS	- .59	NS
V	7.9 (2.5)	8.0 (3.3)	7.8 (1.6)	10.6 (2.5)	9.1 (2.8)	10.5 (2.8)	-.16	NS	-3.62	.01	-2.09	.01
I	9.3 (3.1)	8.9 (3.0)	9.1 (2.4)	10.4 (2.7)	9.8 (3.6)	10.9 (2.0)	.65	NS	-1.36	NS	-1.33	NS
C	10.5 (2.7)	10.2 (3.4)	11.3 (2.9)	13.7 (2.6)	11.2 (3.5)	11.7 (3.2)	.5	NS	-2.29	.05	- .5	NS
S	10.7 (2.3)	10.4 (3.1)	10.3 (2.5)	10.4 (4.0)	11.4 (3.3)	11.1 (2.6)	.62	NS	- .03	NS	.42	NS
A	8.9 (2.4)	8.1 (1.8)	9.4 (1.9)	9.6 (1.8)	8.1 (1.9)	8.8 (1.8)	1.77	.1	- .19	NS	-1.37	NS
verbal IQ	96.7 (13.2)	94.0 (14.8)	97.3 (10.5)	105.8 (12.8)	98.9 (15.1)	103.8 (12.1)	.86	NS	-1.94	.1	-1.44	NS
Full Scale IQ	98.1 (13.5)	92.5 (13.8)	101.1 (10.3)	104.0 (15.0)	97.4 (13.1)	101.3 (12.3)	1.89	.1	- .61	NS	-1.26	NS

1= girls, 2= boys

Table 5b

SIGNIFICANCE of DIFFERENCES of MEANS on INTELLIGENCE TESTS, sub-groups

Tests	Differences between girls						Differences between boys					
	I:III df 70		I:II df 53		II:III df 47		I:III df 75		I:II df 54		II:III df 47	
	t	p<	t	p<	t	p<	t	p<	t	p<	t	p<
BD	1.06	NS	- .63	NS	1.33	NS	-1.85	.1	-1.32	NS	.09	NS
PC	3.29	.01	.01	NS	2.55	.05	1.34	NS	-1.99	.1	2.63	.05
PA	-1.02	NS	- .9	NS	.04	NS	-3.28	.01	-2.37	.05	- .39	NS
OA	.1	NS	-1.55	NS	1.65	NS	- .96	NS	-1.29	NS	.52	NS
COD	- .11	NS	-1.65	NS	1.9	.1	-3.18	.01	-1.45	NS	- .79	NS
non-verbal IQ	1.15	NS	-1.29	NS	2.56	.05	-2.1	.05	-2.25	.05	.61	NS
V	-1.88	.1	.21	NS	-1.74	.1	-3.57	.001	-2.65	.05	.03	NS
I	- .6	NS	.2	NS	- .65	NS	-3.02	.01	-1.7	.1	- .54	NS
C	- .94	NS	- .91	NS	.08	NS	-1.91	.1	-3.51	.001	2.09	.05
S	- .96	NS	.6	NS	-1.13	NS	-1.08	NS	0	NS	- .74	NS
A	1.57	NS	- .74	NS	2.27	.05	-1.54	NS	-2.62	.05	1.5	NS
verbal IQ	- .65	NS	- .14	NS	- .39	NS	-3.09	.01	-2.63	.05	.52	NS
Full Scale IQ	.22	NS	- .77	NS	.96	NS	-3.03	.01	-2.73	.01	.62	NS

I= Sevettijärvi, II= Nellim, III=N.Finland

Table 6

CORRELATIONS of the WISC VERBAL TEST SCORES with AGE

	SEVETTIJÄRVI			NELLIM			NORTH FINLAND		
	I (81)	1 (39) r	2 (42)	II (30)	1 (16) r	2 (14)	III (68)	1 (33) r	2 (35)
VOCABULARY	.19(x)	.08	.28(x)	-.24	-.39	-.09	-.03	.09	-.14
INFORMATION	.44xxx	.39x	.51xxx	.24	.16	.41	.17	.20	.14
COMPREHENSION	.42xxx	.46xx	.41xx	.17	.18	.30	-.03	.00	-.06
SIMILARITIES	.35xx	.28(x)	.42xx	.34(x)	.27	.42	.23(x)	.34x	.12
ARITHMETIC	-.06	-.16	.09	-.20	-.26	-.11	.03	.25	-.17
VERBAL IQ	.37xxx	.29(x)	.46xx	.12	.05	.29	.10	.23	-.02

I, II, III = culture groups; 1 = girls; 2 = boys

(x) $p < .1$
x $p < .05$
xx $p < .01$
xxx $p < .001$

Table 7

A T T R A C T I V E N E S S of S C H O O L

question: 'do you like to go to school' (yes - no)

	SEVETTIJÄRVI % yes	NORTH FINLAND % yes
girls	58	87
boys	24	65

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Table 8

SIGNIFICANCE of DIFFERENCES of MEANS on TEACHERS' RATINGS and DISCRIMINATION ANALYSIS, Sevettijärvi girls (I) versus boys (II)

rating	p < on group rated higher I	II	correlations between discriminating functions and variables
likes to go to school	.001		-.6
impolite		.001	.59
insolent		.001	.57
hostile		.001	.57
untrustworthy		.01	.49
hard-working	.01		-.46
unpersevering		.05	.42
vicious		.01	.39
friendly	.05		-.39
noisy		.05	.39
energetic	.05		-.38
ambitious	.05		-.36
tattle-tale	.05		-.35
stubborn		.05	.35
industrious	.1		-.34
cooperative	.1		-.32
even tempered	.1		-.3
restless		.1	.29

eigen value	%	CHI 1**2	NDF	Prob	Canon.correl.
1.03	100.0	38.22	18	.996	.71
Wilks lambda		F		Prob	
.492718		(18 ,45)= 2.574		.9948	

discriminating functions			estimated pairwise overlap prob		
group	mean	SD		I	II
I Sevetti girls	1.673	1.116	I	1.0	.1136 = 4/31 girls
II Sevetti boys	3.671	.878	II	.1816	1.0 5/33 boys

Table 9

SIGNIFICANCE of DIFFERENCES of MEANS on TEACHERS' RATINGS and DISCRIMINATION ANALYSIS, Sevettijärvi boys(I) versus Finnish boys(II)

rating	p< on group rated higher I	II	correlations between discriminating functions and variables
shy, timid	.01		-.61
energetic		.01	.55
likes to go to school		.05	.47
talkative		.05	.43
flexible		.05	.43
unpersevering	.05		-.42
active		.05	.41
is a leader		.05	.4
short-tempered		.1	.38
dependent	.1		-.37
impolite	.1		-.37
hard-working		.1	.34
retiring	.1		-.34
self-assertive		.1	.34
relaxed		.1	.33
sad, melancholy	.1		-.33

eigen value	%	CHI 1**2	NDF	prob	canon.correl.
.6559	100.0	27.74	16	.966	.6294

Wilks lambda	F	prob
.603884	(16 ,47)=1,927	.9584

disriminating functions			estimated pairwise overlap prob			
group	mean	SD		I	II	
I Sevetti boys	-.1035	.9687	I	1.0	.2052	7/ 33 Sevetti boys
II N.Finland boys	1.492	1.032	II	.2199	1.0	4/ 31 N.Finland boys

00624

TABLE 10.

PERCENTAGES OF CASES OF PUPILS REMAINING IN THE SAME CLASS, FOLLOW-UP AND RETROSPECTIVE STUDY DURING FIRST THREE SCHOOL-YEARS

	I		II		III		I-III	
	(FR)	%	(FR)	%	(FR)	%	(FR)	%
SEVETTIJÄRVI GIRLS	(3)	8	-	-	(2)	5	(5)	11
SEVETTIJÄRVI BOYS	(9)	21	(1)	2	(1)	2	(11)	26
N. FINLAND GIRLS	-	-	(1)	3	-	-	(1)	3
N. FINLAND BOYS	(1)	3	(1)	3	-	-	(2)	6

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Table 11

MEANS, STANDARD DEVIATIONS AND SIGNIFICANCE OF DIFFERENCES OF SCHOOL MARKS

	I,1 (37)	I,2 (43)	II,1 (34)	II,2 (35)
READING	7.29 (1.46)	6.74 (1.12)	7.64 (.99)	7.2 (.88)
WRITING	7.13 (1.11)	6.23 (1.25)	7.26 (.97)	6.77 (.86)
MATHEMATICS	6.54 (1.46)	6.23 (1.27)	6.79 (1.23)	6.97 (1.4)
MEAN	7.32 (.92)	6.78 (.89)	7.3 (.8)	7.06 (.82)

T-TEST BETWEEN	I,1:I,2		II,1:II,2		I,1:II,1		I,2:II,2	
	T	P<	T	P<	T	P<	T	P<
READING	1.88	.1	1.93	.1	-1.14	NS	-1.93	.1
WRITING	3.32	.01	2.19	.05	- .51	NS	-2.12	.05
MATHEMATICS	.99	NS	- .54	NS	- .77	NS	-2.4	.05
MEAN	2.58	.05	1.2	NS	.05	NS	-1.42	.2

I= SEVETTIJÄRVI, II= N.FINLAND, 1= GIRLS, 2= BOYS
including pupils remaining in the same class